UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,504	02/26/2007	Claude Daloz	5284-74PUS	4240

7590   02/15/2011

Thomas Langer
Cohen, Pontani, Lieberman & Pavane LLP
551 Fifth Avenue, Suite 1210
New York, NY 10176

EXAMINER
ELLIOTT IV, BENJAMIN H

ART UNIT	PAPER NUMBER
2474	

MAIL DATE	DELIVERY MODE
02/15/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2010*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-18* is/are pending in the application.

    4a) Of the above claim(s) *1-6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

DETAILED ACTION

1.   Claims 1-6 have been canceled. Claims 7-18 have been added. No new matter

has been added. Claims 7-18 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-6 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over United States Patent Application Publication 2003/0131258 A1 to Kadri et al

(hereinafter "Kadri") in view of United States Patent 6,631,416 B2 to Bendinelli et al

(hereinafter "Bendinelli").

Regarding Claim 7, Kadri discloses **a method for communication between a**

first computer terminal of a private Internet Protocol (IP) network and a second

computer terminal of a public IP network, the method comprising:

initializing a connection, by a mediation system which is associated with the first

computer terminal in the private IP network, to a server in the public IP network

(Kadri: Figure 1; Examiner corresponds the mediation system to the gateway device

(150) and internal contact point (160) of Kadri. Examiner corresponds the private IP

network to the network behind firewall (110) of Kadri. [0021-0022]; disclosed is a private

IP network. [0029]; Examiner correlates the server to the relay server (120) of Kadri that

forms a connection to the gateway in the private network.);

establishing, by the mediation system, a communications tunnel between the

mediation system and the dedicated service port of the server, through a network

boundary equipment (Kadri: Figure 2; the gateway interface (210) of the internal

contact point establishes a tunnel between the relay server and the gateway of the

private network.), **to make an IP interface of the mediation system available to the**

second computer terminal via the control server (Kadri: [0029-0030]; the relay

server has interfaces for external peers (which Examiner correlates to the second

computer terminal) for connection to internal peers of the private network. See [0021-

0022] for IP connections through the firewall.).

Kadri does not expressly disclose configuration routines between a gateway and

a server.

In a similar field, Bendinelli discloses a method and system for setting up

communication between terminals in a public network with terminals in a private

network via a mediation point (Bendinelli: Col. 10, line 60 through Col. 11, line 8).

Bendinelli discloses a network operations center comprising at least a tunnel interface

module, a controller module, a public web server, and an administrative server

(Bendinelli: Figure 6A and corresponding description in Col. 20, line 14 through Col. 24,

line 56). The network operations center provides information necessary for gateways to

establish virtual private networks across the Internet. The network operations center

may also comprise a firewall (Bendinelli: Col. 24, lines 33-42). It is further suggested by

Bendinelli that each of the gateways may comprise a firewall in order to mask their real

IP address (Bendinelli: Col. 23, lines 48-55). The Examiner corresponds the mediation

system to any gateway of Bendinelli, the control server to any and all components of the

network operations center of Bendinelli, and the network boundary equipment to a

firewall of Bendinelli. Bendinelli further discloses **transmitting information, by the**

mediation system, to the control server relating to the configuration of the

mediation system in the private network (Bendinelli: Col. 37, lines 1-11; at least a

first gateway establishes a control path with the network operations center for exchange

of control messages. Examples of configuration information are described in Col. 17,

lines 37-49, Col. 21, lines 30-38 (Examiner also correlates authentication information

with configuration information), and Col. 31, lines 5-21 (including gateways' firewall

information). Examiner further correlates **a dedicated service port of a control server**

to a predetermined TCP port of the network operations center as described in Col. 29,

lines 30-45; a tunnel is established between the network operations center and the

gateway through a dedicated TCP port on the control path.); **and performing an**

operation, by the control server, on the mediation system via the communications

tunnel established through the network boundary equipment (Bendinelli: Col. 37,

line 53 through Col. 38, line 12 and Col. 39, line 39 through Col. 40, line 40; network

operations center controls the firewall(s) to turn "on" or "off" to allow traffic to pass

through the established tunnels.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the method of communicating between terminals as

disclosed by Kadri to include control established by a terminal as disclosed by

Bendinelli to connect a plurality of gateways in order to establish a virtual private

network in the analogous field of firewall tunneling. This is beneficiary to the method in

that unnecessary overhead in setting up virtual private networks is reduced (Bendinelli:

Col. 3, lines 30-46).

Regarding Claim 15, Kadri discloses **a system for communication between a**

first computer terminal of a private Internet Protocol (IP) network and a second

computer terminal of a public IP network, the private IP network comprising

network boundary equipment, the system comprising:

a control server which is associated with the second computer terminal in the

public IP network, the control server being configured to perform an operation on

the mediation system via a communications tunnel established through the

network boundary equipment (Kadri: Figure 1; Examiner corresponds the mediation

system to the gateway device (150) and internal contact point (160) of Kadri. Examiner

corresponds the private IP network to the network behind firewall (110) of Kadri. [0021-

0022]; disclosed is a private IP network. [0029]; Examiner correlates the server to the

relay server (120) of Kadri that forms a connection to the gateway in the private

network.); **and**

a mediation system which is associated with the first computer terminal in the

private IP network, and which is configured to initialize a connection to a

dedicated service port of the control server in the public IP network (Kadri: Figure

2; the gateway interface (210) of the internal contact point establishes a tunnel between

the relay server and the gateway of the private network.), **wherein the mediation**

system is configured to establish the communications tunnel between the

mediation system and the dedicated service port of the control server (Kadri:

Figure 2; the gateway interface (210) of the internal contact point establishes a tunnel

between the relay server and the gateway of the private network.), **through the network boundary equipment, to make an IP interface of the mediation system available to the second computer terminal via the control server** (Kadri: [0029-0030]; the relay server has interfaces for external peers (which Examiner correlates to the second computer terminal) for connection to internal peers of the private network. See [0021-0022] for IP connections through the firewall.).

Kadri does not expressly disclose configuration routines between a gateway and a server.

In a similar field, Bendinelli discloses a method and system for setting up communication between terminals in a public network with terminals in a private network via a mediation point (Bendinelli: Col. 10, line 60 through Col. 11, line 8). Bendinelli discloses a network operations center comprising at least a tunnel interface module, a controller module, a public web server, and an administrative server (Bendinelli: Figure 6A and corresponding description in Col. 20, line 14 through Col. 24, line 56). The network operations center provides information necessary for gateways to establish virtual private networks across the Internet. The network operations center may also comprise a firewall (Bendinelli: Col. 24, lines 33-42). It is further suggested by Bendinelli that each of the gateways may comprise a firewall in order to mask their real IP address (Bendinelli: Col. 23, lines 48-55). The Examiner corresponds the mediation system to any gateway of Bendinelli, the control server to any and all components of the network operations center of Bendinelli, and the network boundary equipment to a firewall of Bendinelli. Bendinelli further discloses **and the mediation system is**

configured to transmit information to the control server relating to the

configuration of the mediation system in the private network (Bendinelli: Col. 37,

lines 1-11; at least a first gateway establishes a control path with the network operations

center for exchange of control messages. Examples of configuration information are

described in Col. 17, lines 37-49, Col. 21, lines 30-38 (Examiner also correlates

authentication information with configuration information), and Col. 31, lines 5-21

(including gateways' firewall information). Examiner further correlates **a dedicated**

service port of a control server to a predetermined TCP port of the network

operations center as described in Col. 29, lines 30-45; a tunnel is established between

the network operations center and the gateway through a dedicated TCP port on the

control path.), and performing an operation, by the control server, on the mediation

system via the communications tunnel established through the network boundary

equipment (Bendinelli: Col. 37, line 53 through Col. 38, line 12 and Col. 39, line 39

through Col. 40, line 40; network operations center controls the firewall(s) to turn "on" or

"off" to allow traffic to pass through the established tunnels.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the method of communicating between terminals as

disclosed by Kadri to include control established by a terminal as disclosed by

Bendinelli to connect a plurality of gateways in order to establish a virtual private

network in the analogous field of firewall tunneling. This is beneficiary to the method in

that unnecessary overhead in setting up virtual private networks is reduced (Bendinelli:

Col. 3, lines 30-46).

7.   Claims 8-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kadri, in view of Bendinelli, and further in view of United States

Patent Application Publication 2004/0028035 A1 to Read (hereinafter "Read").

        Regarding Claim 8, the combination of Kadri and Bendinelli discloses **the**

method of claim 7, but does not expressly disclose the operation of opening a port by

a control server.

        Read discloses a communication system for handling Internet calls between a

public network and a private network separated by a NAT (Read: Abstract). Read

further discloses **an operation is opening a port of the mediation system, the**

operation comprising: receiving, by the mediation system, from the control

server, an open port request comprising an IP address of the mediation system

and a port number of the mediation system to be opened (Read: [0127]; external

server controls proxy interface agent of private network to open or close ports.); **and**

sending, by the mediation system, to the control server, an identifier of the

opened port and an assigned port number of the opened port (Read: [0140]; proxy

indicates to the external server the open port number.).

        It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the method of Kadri and Bendinelli to include control

signaling designating the operation of opening a port external to the private network as

disclosed by Read since all the claimed elements were known at the time the invention

was made and combining these elements according to known methods would have

yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 9, the combination of Kadri and Bendinelli discloses **the method of claim 7**, but does not expressly disclose redirection.

Read discloses wherein **the operation is redirecting a port of the mediation system, the operation comprising:**

receiving, by the mediation system, from the control server, a redirect request comprising an IP address of the mediation system and a port number of the mediation system to be redirected (Examiner corresponds this to a direct connection between two gateways rather than a proxy, or intermediate device, intervening. Read; [0127]; external server controls proxy interface agent of private network to open or close ports. Further suggested by Read in that filtering rules allow changes in port numbers ([0030-0031]). Also see [0127] of Read for allocation of ports.); **and**

sending, by the mediation system, to the control server, an identifier of the redirected port of the mediation system and an assigned port number of the redirected port of the mediation system (Read: [0140]; proxy indicates to the external server the open port number.), **wherein packets arriving at the redirected port of the mediation system are relayed to the dedicated service port of the control server using user datagram protocol (UDP)** (Read: Table 1 on page 8 and [0126]; UDP connections through external server.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control

signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 10, the combination of Kadri and Bendinelli discloses **the method of claim 7**, but does not expressly disclose connect request to previously-opened ports.

Read discloses **wherein the operation is connecting a port of the mediation system to a port of the private network, the operation comprising:**

receiving, by the mediation system, from the control server, a connect port request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which connection is requested in the private network (Read: [0139-0140] and [0075]; previously-opened ports may be connected.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 11, the combination of Kadri and Bendinelli discloses **the method of claim 7**, but does not expressly disclose make server requests.

Read discloses **wherein the operation is making a port of the mediation system a server port, the operation comprising: receiving, by the mediation system, from the control server, a make server request comprising an identifier of a previously-opened port of the mediation system for which configuration as a server port is requested** (As suggested by Read in [0113-0116] in that during protocol negotiations, either the external server or the proxy may make the determination who will be the master (server) and who will be the slave (client).).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 12, the combination of Kadri and Bendinelli discloses **the method of claim 7**, but does not expressly disclose close port requests.

Read discloses **wherein the operation is closing a port of the mediation system, the operation comprising:**
receiving, by the mediation system, from the control server, a close port request comprising an identifier of a previously-opened port of the mediation system for

which closing is requested (Read: [0127]; external server controls proxy interface agent of private network to open or close ports. [0139-0140] and [0075]; previously-opened ports may be connected. Also, [0105] and [0117] for identifiers.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 13, the combination of Kadri and Bendinelli discloses **the method of claim 7**, but does not expressly disclose relay requests.

Read discloses **wherein the operation is performing packet relay at a port of the mediation system, the operation comprising:**

receiving, by the mediation system, from the control server, a packet relay request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which forwarding is requested in the private network (Read: [0127]; external server controls proxy interface agent of private network to open or close ports. [0139-0140] and [0075]; previously-opened ports may be connected. Also, [0105] and [0117] for identifiers. [0127]; relaying function is implemented only after protocol aware signaling is performed.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 14, the combination of Kadri and Bendinelli discloses **the method of claim 7,** but does not expressly disclose relay operations.

Read discloses **wherein the operation is performing packet relay at a port of the mediation system, the operation comprising:**

receiving, by the mediation system, a packet from the private network at a previously- opened port of the mediation system (Read: [0127] (previously stated in rejection of claim 13). [0129]; logical channels (to ports) are relayed from terminals to proxy agent (in private network). Also see [0133] wherein the proxy agent then relays to the terminal using UDP connection.); **and**

sending, by the mediation system, a packet relay statement comprising an identifier of the previously-opened receiving port of the mediation system, an IP address and a port number of a sending port of the private network, and the received packet (Read: [0127]; external server controls proxy interface agent of private network to open or close ports. [0139-0140] and [0075]; previously-opened ports may

be connected. Also, [0105] and [0117] for identifiers. [0016-0020] IP address/port pair

mapping.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the method of Kadri and Bendinelli to include control

signaling designating the operation of opening a port external to the private network as

disclosed by Read since all the claimed elements were known at the time the invention

was made and combining these elements according to known methods would have

yielded nothing more than predictable results, i.e., network address translation across a

plurality of protocols.

Regarding Claim 16, the combination of Kadri and Bendinelli discloses **the**

system of claim 15, but does not expressly disclose the operation of opening a port by

a control server.

Read discloses **wherein the operation is opening a port of the mediation**

system, and wherein the mediation system is configured to:

receive from the control server, an open port request comprising an IP address of

the mediation system and a port number of the mediation system to be opened

(Read: [0127]; external server controls proxy interface agent of private network to open

or close ports.); **and**

send to the control server, an identifier of the opened port and an assigned port

number of the opened port (Read: [0140]; proxy indicates to the external server the

open port number.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have yielded nothing more than predictable results, i.e., network address translation across a plurality of protocols.

Regarding Claim 17, the combination of Kadri and Bendinelli discloses **the system of claim 15**, but does not expressly disclose connect request to previously-opened ports.

Read discloses **wherein the operation performing packet relay at a port of the mediation system, and wherein the mediation system is configured to receive from the control server a packet relay request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which forwarding is requested in the private network** (Read: [0139-0140] and [0075]; previously-opened ports may be connected. Also, [0105] and [0117] for identifiers. [0016-0020] IP address/port pair mapping).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kadri and Bendinelli to include control signaling designating the operation of opening a port external to the private network as disclosed by Read since all the claimed elements were known at the time the invention was made and combining these elements according to known methods would have

yielded nothing more than predictable results, i.e., network address translation across a

plurality of protocols.

Regarding Claim 18, the combination of Kadri and Bendinelli discloses **the**

system of claim 15, but does not expressly disclose relay operations.

Read discloses **wherein the operation is performing packet relay at a port of**

the mediation system, and wherein the mediation system is configured to:

receive a packet from the private network at a previously-opened port of the

mediation system (Read: [0127] (previously stated in rejection of claim 13). [0129];

logical channels (to ports) are relayed from terminals to proxy agent (in private network).

Also see [0133] wherein the proxy agent then relays to the terminal using UDP

connection.); **and send a packet relay statement comprising an identifier of the**

previously-opened receiving port of the mediation system, an IP address and a

port number of a sending port of the private network, and the received packet

(Read: [0127]; external server controls proxy interface agent of private network to open

or close ports. [0139-0140] and [0075]; previously-opened ports may be connected.

Also, [0105] and [0117] for identifiers. [0016-0020] IP address/port pair mapping.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the method of Kadri and Bendinelli to include control

signaling designating the operation of opening a port external to the private network as

disclosed by Read since all the claimed elements were known at the time the invention

was made and combining these elements according to known methods would have

yielded nothing more than predictable results, i.e., network address translation across a

plurality of protocols.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BENJAMIN ELLIOTT whose telephone number is

(571)270-7163. The examiner can normally be reached on Monday thru Friday, 8:00

AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/   BENJAMIN ELLIOTT
Supervisory Patent Examiner, Art Unit 2474   Examiner
                                                           Art Unit 2474